

CLAIMS:

- [C1] Use of IG20 or at least one of its splice variants or a fragment thereof to regulate cell death or cell replication.
- [C2] The use of claim 1, wherein IG20 or at least one of its splice variants is expressed to a higher than normal level.
- [C3] The use of claim 1, wherein IG20 or at least one of its splice variants or a fragment thereof is used to regulate tumor cell death or replication.
- [C4] The use of claim 1, wherein IG20 or at least one of its splice variants or a fragment thereof makes cells more sensitive to induced cell death.
- [C5] The use of claim 1, wherein cell death is induced by radiation.
- [C6] The use of claim 1, wherein cell death is induced by chemotherapy.
- [C7] The use of claim 3, wherein the tumor cells are cancer cells.
- [C8] Use of DENN-SV or at least one of its splice variants or a fragment thereof to regulate cell death or cell replication.
- [C9] Use of an anti-sense molecule of DENN-SV or a fragment thereof to promote cell death or suppress cell replication.
- [C10] Use of Si RNA of DENN-SV or a fragment thereof to promote cell death or suppress cell replication.
- [C11] The use of claim 8, wherein DENN-SV or at least one of its splice variants or a fragment thereof is used to promote growth of cells or to maintain cells alive.
- [C12] The use of claim 8, wherein the cell is selected from the group of primary cells consisting of insulin producing cells, neuronal cells, and stem cells.
- [C13] The use of claim 8, wherein cell replication is suppressed in tumor cells.
- [C14] The use of claim 1, wherein cell death is induced by a ligand that binds to a death receptor.
- [C15] The use of claim 14, wherein the death receptor is selected from the group consisting of FAS-ligand, TNF-alpha, TRAIL, or anti-receptor antibodies.
- [C16] Use of an antibody of IG20 or DENN-SV or at least one of its splice variants or a fragment thereof to regulate cell death or cell replication.
- [C17] A method to modulate levels of IG20 or DENN-SV to regulate cell death or cell proliferation, the method comprising:

- (a) providing a molecule to regulate endogenous levels of IG20 or at least one of its splice variants or DENN-SV or at least one of its splice variants; and
- (b) monitoring the endogenous levels of IG20 or at least one of its splice variants or DENN-SV or at least one of its splice variants.

- [C18]** The method of claim 17, wherein the molecule is selected from the group consisting of a chemical regulator, genetic sequence, cDNA, oligonucleotide, protein, peptide or fragments thereof, and antibodies.
- [C19]** IG20 molecule or its splice variant having an amino acid sequence encoded by nucleic acid sequences represented by GenBank accession numbers AF440100, AF440101, AF440102, AF440103, AF440434.
- [C20]** IG20 molecule or its splice variant having an amino acid sequence encoded by nucleic acid sequences represented by GenBank accession numbers AY263980, AY263981, AY263982, AY263983, AY263984, AY263985, AY263986, AY263988 and AY263989.